CONVERSION OF A PROCEDURAL PROCESS MODEL TO A HYBRID PROCESS MODEL

BACKGROUND

[0001] The present disclosure relates to automation of a process, and more specifically, to converting or migrating a procedural process model for a process to a hybrid process model.

[0002] Automation of processes has been a popular strategy recently. Process models have been developed to gain insights in the processes before they are automated. The process models mainly include procedural process models and declarative process models. The procedural process models excel in modeling structured parts of the processes, but have difficulty in modeling flexible parts of the processes. The declarative process models may model the flexible parts of the processes easily, but it is not convenient for them to model the structured parts of the processes.

[0003] In view of the problems of the procedural process models and the declarative process models, hybrid process models have been proposed, which may be regarded as a mixture of the procedural process models and the declarative process models. The hybrid process models may model both the structured parts and the flexible parts of the processes conveniently.

[0004] Historically, most of the processes are modeled by the procedural process models. Therefore, there is a demand to convert or migrate the procedural process models which have been developed for the processes to the hybrid process models to better model these processes.

SUMMARY

[0005] According to an embodiment of the present disclosure, there is provided a computer-implemented method for converting a procedural process model for a process to a hybrid process model. In this method, a plurality of steps of the process which are included in the procedural process model may be clustered selectively according to historical execution information of the plurality of steps, to generate a plurality of candidate cluster set. One candidate cluster set satisfying a first condition may be selected from the plurality of candidate cluster sets. Then the procedural process model may be converted into the hybrid process model according to the selected candidate cluster set.

[0006] According to another embodiment of the present disclosure, there is provided a system comprising one or more processors, a memory coupled to at least one of the processors, and a set of computer program instructions stored in the memory. When executed by at least one of the processors, the set of computer program instructions perform following actions. A plurality of steps of the process which are included in the procedural process model may be clustered selectively according to historical execution information of the plurality of steps, to generate a plurality of candidate cluster set. One candidate cluster set satisfying a first condition may be selected from the plurality of candidate cluster sets. Then the procedural process model may be converted into the hybrid process model according to the selected candidate cluster set.

[0007] According to a yet another embodiment of the present disclosure, there is provided computer program product for allocating data to a plurality of nodes. The computer program product comprises a computer readable storage medium having thereon first program instructions, second program instructions and third program instructions. The first program instructions are executable by a processor to cause the processor to selectively cluster a plurality of steps of the process which are included in the procedural process model, according to historical execution information of the plurality of steps, to generate a plurality of candidate cluster set. The second program instructions are executable by the processor to cause the processor to select one candidate cluster set satisfying a first condition from the plurality of candidate cluster sets. The third program instructions are executable by the processor to cause the processor to convert the procedural process model into the hybrid process model according to the selected candidate cluster set.

[0008] It is to be understood that the Summary is not intended to identify key or essential features of embodiments of the present invention, nor is it intended to be used to limit the scope of the present invention. Other features of the present invention will become comprehensible through the description below.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0009] These and other objects, features and advantages of the present invention will become apparent from the following detailed description of illustrative embodiments thereof, which is to be read in connection with the accompanying drawings. The various features of the drawings are not to scale as the illustrations are for clarity in facilitating one skilled in the art in understanding the invention in conjunction with the detailed description. In the drawings:

[0010] FIG. 1 shows an exemplary computer system which is applicable to implement the embodiments of the present invention;

[0011] FIG. 2 shows an exemplary procedural process model for a process;

[0012] FIG. 3 shows an example hybrid process model for a process;

[0013] FIG. 4 shows a flow chart of a method for converting a procedural process model for a process to a hybrid process model according to an embodiment of the present disclosure; and

[0014] FIG. 5 shows a block diagram of a device for converting a procedural process model for a process to a hybrid process model according to an embodiment of the present disclosure.

DETAILED DESCRIPTION

[0015] Some preferable embodiments will be described in more detail with reference to the accompanying drawings, in which the preferable embodiments of the present disclosure have been illustrated. However, the present disclosure can be implemented in various manners, and thus should not be construed to be limited to the embodiments disclosed herein.

[0016] Referring now to FIG. 1, in which an exemplary computer system/server 12 which is applicable to implement the embodiments of the present invention is shown. Computer system/server 12 is only illustrative and is not intended to suggest any limitation as to the scope of use or functionality of embodiments of the invention described herein.